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L14: Entry 138 of 146

File: USPT

Jan 4, 2000

US-PAT-NO: 6012045

DOCUMENT-IDENTIFIER: US 6012045 A

TITLE: Computer-based electronic bid, auction and sale system, and a system to teach new/non-registered customers how bidding, auction purchasing works

DATE-ISSUED: January 4, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Barzilai; Nizan	Hollywood	FL	33021	
Davidson; Ron	Hollywood	FL	33021	

APPL-NO: 08/ 886492 [PALM]

DATE FILED: July 1, 1997

INT-CL: [06] G06 F 17/60

US-CL-ISSUED: 705/37; 705/26, 379/93.12, 283/67

US-CL-CURRENT: 705/37; 283/67, 379/93.12, 705/26

FIELD-OF-SEARCH: 705/26, 705/37, 380/25, 273/306, 283/67

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/> <u>4654482</u>	March 1987	DeAngelis	379/95
<input type="checkbox"/> <u>4974252</u>	November 1990	Osborne	379/92
<input type="checkbox"/> <u>5259023</u>	November 1993	Katz	379/88
<input type="checkbox"/> <u>5282633</u>	February 1994	Boylan et al.	273/306
<input type="checkbox"/> <u>5561707</u>	October 1996	Katz	379/88
<input type="checkbox"/> <u>5611051</u>	March 1997	Pirelli	395/210
<input type="checkbox"/> <u>5774873</u>	June 1998	Berent et al.	705/26
<input type="checkbox"/> <u>5794219</u>	August 1998	Brown	705/37
<input type="checkbox"/> <u>5803500</u>	September 1998	Mossberg	283/67
<input type="checkbox"/> <u>5819914</u>	October 1998	Fujisaki	379/93.12

<input type="checkbox"/> <u>5835896</u>	November 1998	Fisher et al.	705/37
<input type="checkbox"/> <u>5845265</u>	December 1998	Woolston	705/37
<input type="checkbox"/> <u>5862223</u>	January 1999	Walker et al.	380/25

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FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	US-CL
0628920	December 1994	GB	

OTHER PUBLICATIONS

Going Once. Going Twice. Cybersold, BusinessWeek, Aug. 11, 1997.
Experience the Napa Valley Wine Auction Without Ever Leaving Home. Business Wire, Palo Alto, California, Jun. 4, 1996.
World's First Real-Time Travel Auction Service to be Available Via World Wide Web; ETA to Open Bidding to Consumers, Travel Industry; Web Auction Leader eBay to Provide Technology Support. Business Wire, Long Beach, California, Nov. 4, 1996.
Virtual Vineyard and Sun Microsystems Give Napa Valley Wine Auction Global Reach. Business Wire, Palo Alto, California, Apr. 22, 1997.

ART-UNIT: 275

PRIMARY-EXAMINER: MacDonald; Allen R.

ASSISTANT-EXAMINER: Irshadullah; M.

ATTY-AGENT-FIRM: Kain, Jr.; Robert C.

ABSTRACT:

The computer-based method of selling consumer products and consumer services includes, in one embodiment, the utilization of a computer system, which maintains the electronic bid, auction and sales records, and a plurality of customer computers interconnected with the computer system via a telecommunications link. The computer system electronically establishes a virtual showroom accessible by the customer's computers which displays consumer goods and services and information regarding the commonly available selling price for each product and service. For example, the system displays the manufacturer's suggested retail price or MSRP, a minimum opening bid price, information regarding the make, model and manufacturer or distributor of the offered product or service, and bid cycle data revealing the open, close and acceptance dates for the bids. The computer-based method electronically posts all bids made by bidders on the products and services during the bid period. The system accepts the highest bid while excluding bids greater than the lowest high bid from a single bidder. The system further electronically consummates the sale. Each bid costs the bidder a predetermined amount of money. The system also provides an electronic bid, auction and sale game. The computer-based method also electronically posts all winning and accepted bids thereby documenting the sale of the plurality of products and services purchased by the bidders.

21 Claims, 13 Drawing figures

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L9: Entry 11 of 20

File: USPT

Apr 22, 2003

DOCUMENT-IDENTIFIER: US 6553346 B1

TITLE: Conditional purchase offer (CPO) management system for packages

Drawing Description Text (11):

FIGS. 10a and 10b illustrate sample tables from the secured seller rules database of FIG. 3;

Detailed Description Text (30):

As discussed further below in conjunction with FIG. 10, the data storage device 330 includes a secured seller rules database 1000. The secured seller rules database 1000 preferably maintains the CPO rules for the one or more agency-based sellers associated with the secured server 300. As previously indicated, the secured seller rules database 1000 may be stored in an encrypted format to maintain the integrity and confidentiality of the highly sensitive information included in the CPO rules. In addition, the data storage device 330 includes a component CPO rule evaluation process 1300, discussed further below in conjunction with FIG. 13. Generally, the component CPO rule evaluation process 1300 is a subroutine executed by the package CPO posting process 1100, which receives a component CPO and compares the CPO against the rules of one or more agency-based sellers to generate a response on behalf of the sellers to the given component CPO.

Detailed Description Text (40):

As previously indicated, the secured server 300 preferably maintains one or more secured seller rules databases 1000 to store the CPO rules for the one or more agency-based sellers associated with the secured server 300. An example of a secured seller rules database 1000 is shown in FIG. 10a for an agency-based airline and in FIG. 10b for an agency-based hotel.

Detailed Description Text (41):

FIG. 10a illustrates an exemplary secured airline rules database 1000 which preferably maintains the CPO rules for one or more agency-based airlines associated with a particular secured server 300. As previously indicated, the secured airline rules database 1000 may be stored in an encrypted format to maintain the integrity and confidentiality of the highly sensitive information included in the CPO rules. The secured airline rules database 1000 maintains a plurality of records, such as records 1002 and 1004, each associated with a different CPO rule. For each CPO rule identified by rule number in field 1010, the secured airline rules database 1000 includes the associated restrictions defined by the respective agency-based airline in fields 1012 through 1044.

Detailed Description Text (42):

FIG. 10b illustrates an exemplary secured hotel rules database 1050 which preferably maintains the CPO rules for one or more agency-based hotels associated with a particular secured server 300. As previously indicated, the secured hotel rules database 1050 may be stored in an encrypted format to maintain the integrity and confidentiality of the highly sensitive information included in the CPO rules. The secured hotel rules database 1050 maintains a plurality of records, such as records 1052 through 1056, each associated with a different CPO rule. For each CPO rule identified by rule number in field 1060, the secured hotel rules database 1050 identifies the applicable hotel sites in field 1065 and includes the associated

restrictions defined by the respective agency-based hotel in fields 1070 through 1090.

Detailed Description Text (57):

As shown in FIG. 13, the component CPO rule evaluation process 1300 initially identifies all CPO rules in the secured seller rules database 1000 which are pertinent to the component CPO during step 1310. Thereafter, during step 1320, the buyer defined conditions from the component CPO record in the component CPO database 800 are then compared to the corresponding seller defined restrictions from the secured seller rules database 1000 during step 1320, for each CPO rule identified during the previous step.

Other Reference Publication (11):

Onsale: Auction Supersite, selected pages downloaded from www.onsale.com on Sep. 8, 1997.

Other Reference Publication (32):

"World's First Real-Time Travel Auction Service to Be Available Via World Wide Web ETA To Open Bidding to Consumers," Business Wire, DIALOG Trade & Industry Database (Nov. 4, 1996).

Other Reference Publication (57):

Carey, Christopher, "Firm Offers Auction For Airline Tickets", St. Louis Post-Dispatch, Aug. 7, 1991 at pge 1B.

Other Reference Publication (58):

Del Rosso, Laura, "Marketel Says It Plans to Launch Air Fare 'Auction' in June", Travel Weekly, Apr. 29, 1991.

Other Reference Publication (68):

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Other Reference Publication (76):

American Airlines Internet Silent Auction, selected pages downloaded from www.americanair.com (date unknown).

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Cathay Pacific: CyberTraveler Auction #3--Official Rules, selected pages downloaded from www.cathaypacific.com (Jul. 30, 1996).

Other Reference Publication (80):

Laura Del Rosso, Marketel Says It Plans to Launch Air Fare 'Auction' in June: Marketel International, Inc., Travel Weekly, Apr. 29, 1991, at 1.

Other Reference Publication (90):

World's First Real-Time Travel Auction Service to Be Available Via World Wide Web: ETA To Open Bidding to Consumers, Business Wire, DIALOG Trade & Industry Database (Nov. 4, 1996).

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Other Reference Publication (109):

Rockoff, Todd E., et al., "Design of an Internet-based system for remote Dutch auctions," Internet Research: Electronic Networking Applications and Policy, vol. 5, No. 4, pp. 10-16, 1995.

Other Reference Publication (110):

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Bunker, Ted, "How Auction Technology Sped And Enhanced Sale Of Radio Licenses," Investor's Business Daily, Executive Update, Regulation, p. A3, Feb. 24, 1995.

Other Reference Publication (116):

"Unusual Farmland Auction Set," Harrison Scott Publications, Liquidation Alert, Mar. 28, 1994.

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"The Computer Museum brings auction block to cyberspace in First Internet Auction," Business Wire, Mar. 14, 1994.

Other Reference Publication (119):

Booker, Ellis, "Mega real estate auction counts on imaging," Computerworld, p. 20, Dec. 7, 1992.

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Abstract: "A forward/reverse auction algorithm for asymmetric assignment problems," Computational Optimization and Applications, Dec. 1992.

Other Reference Publication (128):

Miller, Ross M., "The Design of Decentralized Auction Mechanisms that Coordinate Continuous Trade in Synthetic Securities," Journal of Economic Dynamics and Control, pp. 237-253, 1990.

Other Reference Publication (129):

"Business Briefing, Airline Seats May Go on the Auction Block", Insight on the news, Dec. 4, 1989.

Other Reference Publication (132):

"An Electronic Auction Ahead For Airline CRS's?", The Business Week Newsletter for Information Executives, Oct. 27, 1989.

Other Reference Publication (137):

"AUCNET: TV Auction Network System," Harvard Business School, Jul. 19, 1989.

Other Reference Publication (142):

Banatre, Michel, "Distributed auction bidding system," IPC Business Press, Computer Communications, vol. 4, No. 4, Aug. 1981.

First Hit Fwd Refs

L14: Entry 137 of 146

File: USPT

Apr 4, 2000

US-PAT-NO: 6047274

DOCUMENT-IDENTIFIER: US 6047274 A

TITLE: Bidding for energy supply

DATE-ISSUED: April 4, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Johnson; Jack J.	Summit	NJ		
Coyle; William F.	Summit	NJ		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Geophonic Networks, Inc.	Summit	NJ			02

APPL-NO: 09/ 023968 [PALM]

DATE FILED: February 13, 1998

PARENT-CASE:

This Application claims the benefit of the priority of Provisional Applications Ser. No. 60/039,041 filed Feb. 24, 1997 and Ser. No. 60/064,421, filed Oct. 30, 1997.

INT-CL: [07] G06 F 17/60

US-CL-ISSUED: 705/412; 705/400, 705/10, 379/112, 379/115

US-CL-CURRENT: 705/412; 705/10, 705/400

FIELD-OF-SEARCH: 705/412, 705/10, 705/400, 379/112, 379/115

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/> <u>3913829</u>	October 1975	Fink	705/412
<input type="checkbox"/> <u>5168446</u>	December 1992	Wiseman	
<input type="checkbox"/> <u>5237507</u>	August 1993	Chasek	705/412
<input type="checkbox"/> <u>5375055</u>	December 1994	Togher et al.	

<input type="checkbox"/>	<u>5508913</u>	April 1996	Yamamoto et al.	
<input type="checkbox"/>	<u>5519622</u>	May 1996	Chasek	705/412
<input type="checkbox"/>	<u>5606602</u>	February 1997	Johnson et al.	379/115
<input type="checkbox"/>	<u>5627759</u>	May 1997	Bearden et al.	
<input type="checkbox"/>	<u>5748104</u>	May 1998	Argyroudis et al.	
<input type="checkbox"/>	<u>5790642</u>	August 1998	Taylor et al.	379/112
<input type="checkbox"/>	<u>5794212</u>	August 1998	Mistr, Jr.	
<input type="checkbox"/>	<u>5894422</u>	April 1999	Chasek	700/291

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Veall, Michael R., On Estimating the Effects of Peak Demand Pricing, Journal of Applied Econometrics, vol. 1, 81-93 (1986).

Engle, Robert F., Modelling Peak Electricity Demand, Journal of Forecasting, vol. 11n3, 241-251 (1992).

ART-UNIT: 271

PRIMARY-EXAMINER: Cosimano; Edward R.

ASSISTANT-EXAMINER: Edge; William Brian

ATTY-AGENT-FIRM: Friedman; Allen N. McCarter & English, LLP

ABSTRACT:

An auction service is provided that stimulates competition between energy suppliers (i.e., electric power or natural gas). A bidding moderator (Moderator) receives bids from the competing suppliers of the rate each is willing to charge to particular end users for estimated quantities of electric power or gas supply (separate auctions). Each supplier receives competing bids from the Moderator and has the opportunity to adjust its own bids down or up, depending on whether it wants to encourage or discourage additional energy delivery commitments in a particular geographic area or to a particular customer group. Each supplier's bids can also be changed to reflect each supplier's capacity utilization. Appropriate billing arrangements are also disclosed.

44 Claims, 16 Drawing figures

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L14: Entry 137 of 146

File: USPT

Apr 4, 2000

DOCUMENT-IDENTIFIER: US 6047274 A
TITLE: Bidding for energy supply

Abstract Text (1):

An auction service is provided that stimulates competition between energy suppliers (i.e., electric power or natural gas). A bidding moderator (Moderator) receives bids from the competing suppliers of the rate each is willing to charge to particular end users for estimated quantities of electric power or gas supply (separate auctions). Each supplier receives competing bids from the Moderator and has the opportunity to adjust its own bids down or up, depending on whether it wants to encourage or discourage additional energy delivery commitments in a particular geographic area or to a particular customer group. Each supplier's bids can also be changed to reflect each supplier's capacity utilization. Appropriate billing arrangements are also disclosed.

Brief Summary Text (14):

In many states or geographic regions, local electric utilities have formed wholesale power pools in which they share power, as needed, with other members of the pool under arrangements and according to rules previously agreed to by all the members. In some of these power pools, the members' generating facilities and key portions of their respective power grids are placed under the control of a regional or pool controller who manages the continuous balancing of power being transmitted across these grids for greatest efficiency and at lowest cost to the members. The pool controller in some cases, for example, will advise the pool members on one day of the power he expects to need during each hour of the following day, in order to satisfy the projected aggregate demand on the pool's combined grid by the utilities' customers. Each member is invited to submit offers (quantities and prices) of the power it is willing to supply to the combined grid. Starting with the lowest-priced power first, the controller accepts such offers until he reaches the aggregate quantity he needs for each hour of the next day. Typically, the clearing price--the price of the last unit of power needed by the controller to meet his projected demand for each hour--is used to set the price that all suppliers for that hour will receive, notwithstanding that some of the accepted offers were at prices lower than the clearing price. This approach ensures an efficient but equitable least-cost wholesale pricing arrangement among the pool members.

Brief Summary Text (20):

The provision of electric power and natural gas to end users is dominated by fixed price arrangements set according to (i) orders promulgated by the federal or state governmental bodies regulating providers, (ii) tariffs filed with such governmental authorities by the providers, or (iii) contractual arrangements between providers and end users. However, because of technological and regulatory changes, the provision of these sources of energy is becoming more of a commodity, with competition between providers expected to increase dramatically in the next few years. The invention disclosed herein provides an auction service that will stimulate this competition and facilitate the consumer's ability (and that of resellers) to make economic choices between providers. In this method and system, providers supply energy (i.e., electric power or natural gas) to end users (or resellers) in accordance with economic incentives (e.g., lowest price) resulting

from a bidding process between participating providers, administered by a bidding service entity through operation of a central processor, a computer referred to as a bidding moderator (the "Moderator"). The bidding process to supply electric power will be conducted separate and apart from the bidding process to supply natural gas. Power generators will compete only with other power generators. Gas producers will compete only with other gas producers. However, for ease of reference, power generators and gas producers are each referred to herein as "energy providers" or just "Providers." Through this auction, Providers will be apprised of the bids of competing Providers and have an opportunity to modify their bids accordingly.

Brief Summary Text (21):

Each of the Providers transmits to the Moderator the rate it is willing to charge (or other economic incentive it is willing to offer) for electric power or natural gas to be provided to an end user or group of end users, over some particular period of time. This "bid" may be lower than that Provider's established rate for any of several reasons (e.g., the Provider has excess generating or production capacity at that time). The Provider may, for example, also decide for capacity or competitive reasons to place different bids on energy to be provided, for example, to different end users at different times of day and at different destinations (e.g., with higher prices for electric power supplied during daily peak demand periods or for power delivered to destinations at greater distances from the Provider's power generation facilities). The Provider may change its bids as often as it likes as marketplace demands for energy change or in response to competitors' bidding activities.

Brief Summary Text (22):

The Moderator collects this bid information from all the Providers, sorts it according to the rules of the auction (e.g., sorting it among delivery destinations--such as the grid interfaces of local electric distribution companies serving end users), and may further process this bid information, for example, to select Providers for particular end users. This provider selection information may include, for example, a prioritization of the Provider selection in accordance with Providers' bids or the designation of a selected Provider or a default Provider. The Moderator then transmits selected portions of this information to a control computer associated with each end user or group of end users, as well as to participating Providers' energy network management centers. Each control computer gets the rate information and/or provider selection information from the Moderator that pertains to the end user or group of end users with whom the control computer is associated. The Moderator gives each Provider bid information from other Providers for at least a portion of the end users in regard to which any Provider has submitted a bid.

Brief Summary Text (24):

From the list of all Providers providing bid information to the Moderator, each control computer (or the Moderator) can select those Providers from whom participating end users will be provided electric power or natural gas and can change that selection at any time. After each new bid is submitted by a Provider and is processed by the Moderator, the rate and/or provider selection data will be transmitted to the relevant control computers (or retained by the Moderator if the Moderator will perform the functions of the control computer, including selecting a Provider for each set of end users) and rate information will be distributed to some or all of the Providers in order to implement the auction. A Provider, for example, may not be interested in receiving the bids of other Providers who are not active in the same geographic regions. All Providers will have the opportunity thereafter to submit a lower or higher bid for any end user or group of end users to whom they wish to supply electric power or natural gas.

Brief Summary Text (25):

The Moderator collects end users' actual usage data from end users' meters and processes this data to create periodic usage reports to be transmitted to

Providers. If meter readings are performed by the end user's DISCO or a third-party meter reading service entity rather than the Moderator, reports of such end user's actual energy usage can be collected by the DISCO or third-party service entity and transmitted to the Moderator for processing and subsequent transmission by the Moderator to the respective Provider. The Provider, as part of managing its available capacity, can adjust its bids, for example, to create more demand for its available capacity on a spot basis, resulting in incremental revenue for the Provider that would not be achievable otherwise.

Brief Summary Text (27):

Through this bidding process, Providers can compete to supply electric power or natural gas to end users based on available capacity, delivery destinations, volume discounts, peak period requirements, etc. Providers can also manage their power generation, gas production and/or energy provisioning activities by adjusting their bids from time to time, depending on capacity utilization or other energy availability factors. And end users (and resellers) can easily make economic choices among competing Providers.

Drawing Description Text (5):

FIG. 4 is a schematic representation of an exemplary method of the invention showing transmission of bids by Providers to the Moderator, processing of bids by the Moderator and transmission of Provider selection data to the control computers, selection of Providers by the respective control computers and transmission of selection notifications to the Moderator, and transmission of such notifications by the Moderator to the selected Providers and the applicable DISCOs.

Drawing Description Text (14):

FIG. 13 is a schematic view of an exemplary system of the invention showing the applicable DISCO for each set of end users collecting the meter reading data from the meters of end users participating in the auction service and transmitting such meter reading data to the Moderator's adjunct computer.

Drawing Description Text (15):

FIG. 14 is a schematic view of an exemplary system of the invention showing third party meter reading service entities (independent of the applicable DISCOs) collecting the meter reading data from the meters of end users participating in the auction service and transmitting such meter reading data to the Moderator's adjunct computer.

Detailed Description Text (2):

The Energy Auction System ("EAS") can be made available to all end users of electric power or natural gas (and resellers of either), but will function best for those end users who have meters that can be read remotely by electronic means known in the industry (e.g., with access via public or private wired or wireless telecommunications facilities, coaxial cable facilities, power line communications access, etc., whether using circuit-switched, packet data, frame relay or asynchronous transfer mode networks or other communications facilities utilizing known technologies). An exemplary embodiment of the EAS system architecture is designed to operate as follows:

Detailed Description Text (3):

(i) Providers transmit their most economically advantageous rates (or other economic incentives) as bids to the Moderator;

Detailed Description Text (4):

(ii) the Moderator processes these bids according to specified rules of the auction to which all bidders agree, in order to produce an "apples-to-apples" comparison of the rates or other economic incentives offered by the bidders and, further, to generate provider selection data pertaining to each end user or group of end users associated with a particular control computer;

Detailed Description Text (5):

(iii) the Moderator transmits back to the bidders some or all of the bids received from the other bidding Providers, giving them an opportunity to adjust some or all of their bids;

Detailed Description Text (7):

(v) using the information received from the Moderator, each control computer selects the Provider offering the lowest rate (or best economic value) at that time to the end users associated with that control computer (after applying any decision rules formulated and inputted by the control computer's administrator) and transmits such selection to the Moderator;

Detailed Description Text (15):

(xiii) for those end users who so elect (assuming their selected Providers agree), the Moderator can prepare and transmit to each end user a consolidated billing statement, based on the actual energy usage data received by the Moderator from that end user's meter during an entire billing cycle and the winning bid data relating to all selected Providers who supplied electric power or natural gas to this end user during that billing cycle (i.e., consolidating billable charges from all Providers of electric power to such end user on one bill and consolidating billable charges from all Providers of natural gas to such end user on another bill).

Detailed Description Text (16):

Transmissions by Providers of bids to the Moderator, transmissions by the Moderator of processed bid data to relevant control computers and rate information to Providers, transmissions by control computers of Provider selection notifications to the Moderator, and transmissions by the Moderator of winning bid notifications to selected Providers (and, perhaps, to the relevant DISCO) can be made via data link, dedicated facility or any private or public wired or wireless telecommunications network. Similar means can be used for transmissions by end users' meters of usage data to the Moderator, for transmissions by the Moderator of the periodic energy usage reports derived from such meter reading data to the Providers and the applicable DISCOs, and for transmissions by the Moderator to the respective Provider of billing statements the Moderator prepares for each end user.

Detailed Description Text (20):

The Moderator will establish rules and standards under which the auction process will be conducted. Some of those rules will be set to enable the Moderator to compare competing bids on an "apples-to-apples" basis, in order to determine the best economic value being offered to end users. Bids submitted to the Moderator must conform to such rules in order to be considered by the Moderator. The auction rules may take into account such factors as the difference in the nature of electric power generation and gas supply. For example, the supply of electric power must be controlled at the point of generation, while gas is capable of being stored, the transmission pipelines themselves constituting a significant storage medium.

Detailed Description Text (21):

In general, the Moderator may require bidders to formulate bids based on, for example, (i) a particular period of time during which they will supply energy (e.g., the next hour or the next 12 months), (ii) a specific end user or a group or class of end users to whom they will supply energy, (iii) a stated class of service they will supply (e.g., uninterruptible v. interruptible, high-voltage v. stepped-down service, etc.), (iv) whether they will supply 100% of an end user's energy needs during a specified period or only supply up to a specific quantity of energy during a set period, (v) a specific delivery destination (e.g., a grid or pipeline interface of the end user's DISCO at which the DISCO will accept delivery of power

or natural gas, respectively, from outside suppliers), (vi) the estimated amount of the energy required on a recurring basis by each applicable end user or set of end users, (vii) the frequency with which the bidder will receive periodic feedback reports from the Moderator of actual energy usage by the end users to whom the bidder wishes to supply energy--a function primarily of whether the end users have remotely-readable meters sending usage reports to the Moderator on a recurring basis; and (viii) whether the end user will be billed separately for each Provider's energy or on a consolidated basis for all Providers supplying energy to such end user during the same billing cycle. A Provider may wish to formulate and submit more than one bid for an end user or group of end users (e.g., some end users may require more than one class of service, others may require that electric power or natural gas be delivered to more than one location, etc.).

Detailed Description Text (22):

The competing Providers bid for customers by transmitting to the Moderator the economic incentive each Provider will offer for supplying energy to different end users or groups of end users. The economic incentive presently contemplated as being most usual is the rate (amount of money charged per unit of energy). However, many other kinds of economic incentive may be offered, such as a credit toward other services (e.g., frequent flyer points) or a credit toward an additional rebate that may be offered if a user's energy usage for a given period rises above a threshold. The economic incentive could be a combination of rate and another incentive. But the economic incentive should be selected from a limited set authorized by the Moderator, because the incentive must be capable of being evaluated by the software in the Moderator or its associated adjunct computer. Each bid is associated with a time period within which the bid will be effective.

Detailed Description Text (23):

The rules of the bidding process related to such time periods can be structured in many ways. The following are examples of such possible bidding rules:

Detailed Description Text (24):

(a) The day is divided into blocks of time by the Moderator and bids are submitted for each block of time. All bids for a given block of time must be submitted prior to a cut-off time that precedes that block of time by a protection interval. Any bid received after the cut-off time is considered to be effective for the next block of time, unless a new bid is subsequently received from the same Provider that would be applicable to the same end user or group of end users. The protection interval applicable to bids to supply electric power, for example, is needed to permit all of the following actions to take place prior to the bid starting time: (i) processing of the bid information by the Moderator and transmission to the relevant control computer; (ii) selection of the winning bidder by the appropriate control computer and transmission of that selection back to the Moderator; (iii) the subsequent transmission of a selection notification to the selected Provider (or its associated adjunct computer) and, perhaps, to the DISCO serving the applicable end user or group of end users; and (iv) the scheduling of the power to be delivered by the selected Provider with the power grid controller(s) between the point of the Provider's generating facility (or the point at which the Provider takes title to any purchased power to be delivered to the end user) and the grid interface of the end user's DISCO. For example, if one hour blocks of time are auctioned, a 30 to 60 minute protection interval may be appropriate. The protection interval applicable to bids to supply natural gas may be much longer due to the relatively slow speed at which natural gas can be transported (when compared to that for newly-generated electric power).

Detailed Description Text (25):

(b) Providers are permitted to submit bids for any time interval by specifying a start time and a termination time. However, no bid can be effective before a protection time interval specified by the bidding service provider. The Moderator provides confirmation of received bids back to the Provider if the data link from

the Moderator to the Providers is provided with a selective messaging capability.

Detailed Description Text (26):

(c) Providers may be permitted to enter default bids for any block of time for which they transmit no other bid.

Detailed Description Text (27):

(d) As a fail-safe mechanism, to avoid use of old bids that have not been changed due to communication failure, the Moderator may impose a rule setting a time limit (a fail-safe protection time) to the applicability of any bid. At the expiration of the time limit, the expired bid could default to a preset default bid or to no bid. Such a rule could also be built into a Provider's adjunct computer to protect against a failure in the Moderator-to-Provider data link.

Detailed Description Text (28):

In formulating a bid, a Provider will typically need to know the location of the end user's facility to which energy will ultimately be delivered. More particularly, in most cases a Provider must know in which DISCO's service area the end user's facility is located and, perhaps, in which specific section of the DISCO's service area that facility is situated. Under most electric power deregulation efforts to date, for example, a Provider will be required to pay open access transmission fees to transport its power from its point of generation (or the point at which the Provider took title to the power, if it was purchased in the wholesale market) to the interface at which the end user's DISCO accepts power from outside suppliers. For the last leg of the transmission path, from the DISCO's outside interface to the specific section of the DISCO's power grid within which the end user is located, the provider will generally be required to pay a "retail wheeling" fee to the DISCO. This fee may vary depending on which specific section of the DISCO's power grid is the destination for the power to be delivered by the Provider. All of these transmission and wheeling charges would be expected to be incorporated in any bid submitted by a Provider to the Moderator. For end users with facilities at more than one location (and, perhaps, situated in different DISCOs' service areas), the Moderator can accommodate the submission of composite bids by Providers, formulated by the bidders to cover some or all of such locations.

Detailed Description Text (29):

To give bidders more precise data on which to base their bids, the Moderator can provide bidders with historical usage profile information for participating end users or groups of end users. The Moderator can update such historical information on a continuing basis to assure bidders they have current and reliable data. An end user who is a new subscriber to EAS may be required to furnish the Moderator with at least 30 days and as much as 24 months of historical usage data before the Moderator permits that end user to participate in the auction.

Detailed Description Text (30):

The transmission of bidding data from the Moderator to each of the Providers is essential for the auction to function most effectively. This feedback permits the Providers to adjust their own bids for any particular end user or group of end users in view of other Providers' bids for that same end user or group. In a block of time bidding scheme, this transmission may take place, in different service offerings, either before or after the bid cutoff time for a given block of time. If transmitted before the cutoff time, the Providers have an opportunity, up to the cutoff time, to adjust their bids for that block of time. If the service is arranged for transmission of such data back to the Providers after the cutoff time, the Providers can adjust their bids for the next or subsequent blocks of time. If the bids are transmitted back to the Providers after the cutoff time but before the bid's effective time, the Providers would be able to manage their power generation, gas production and/or energy provisioning activities to take account of that time interval's bid structure. The bids can be adjusted to be higher or lower, depending

on whether the Provider wishes to further encourage or discourage additional energy delivery commitments. The Provider may wish to reduce its bid, for example, to stimulate additional delivery commitments or increase its bid to discourage additional commitments. Depending on the transmission and computer technologies used, transmissions back to the Providers could also be accomplished by posting the bids on an Internet website, bulletin board system or other similar facility, making them available for retrieval by all Providers.

Detailed Description Text (31):

Depending on the particular implementation of the auction, it may be appropriate to transmit all received bids to all Providers. However, each Provider's own bids need not always be transmitted back to it and there may be Providers who focus, for example, on certain delivery destinations or certain classes of end users and are not interested in seeing bids from Providers serving other delivery destinations or end users. In any event, at least a portion of the bids are transmitted to at least a portion of the Providers in order to implement an auction.

Detailed Description Text (32):

The bid information being transmitted between the Moderator and the Providers is sensitive business information and may need, under various circumstances, to be encrypted. Depending on how the service is arranged, there may be a need to protect the privacy of bids from interception by other participating Providers or from interception by non-participating Providers. Some of the most sensitive information would be bid information sent from the Providers to the Moderator and bid confirmation messages from the Moderator to the Providers. Some less sensitive information would be the bids transmitted back to participating Providers after the cutoff time for a given block of time. There are several encryption schemes known in the art for such use, including the RSA and PGP schemes.

Detailed Description Text (33):

To reduce the exposure of end users to the potential volatility of prices offered via the auction, EAS will allow default Providers to participate. If, for example, prices bid in the auction rise above a fixed upset price previously agreed to by the default Provider, the relevant control computer (or the Moderator) will select the default Provider as the winning bidder. The Moderator may negotiate with one or more Providers to serve as default Providers for EAS. In the alternative, an end user or group of end users (or an energy reseller) may wish to specify to the Moderator that a particular Provider be designated as that end user's or reseller's default Provider (e.g., a Provider who has entered into a contract with the end user to supply a significant portion of that end user's electric power or natural gas needs outside of the auction process).

Detailed Description Text (34):

The Moderator can accommodate end users (and energy resellers) who wish to limit the group of Providers from whom the Moderator will evaluate bids when a Provider is to be selected to supply energy to such end users (or customers of such resellers). An end user (or reseller) may wish to instruct the Moderator (or the administrator of the control computer associated with such end user) that energy be supplied to that end user only by Providers specified by that end user (or reseller). The Moderator, in compliance with this instruction, would include the bids of only this set of specified Providers when generating provider selection data in regard to such end users. In the alternative, this instruction by the end user can also be implemented at the control computer associated with that end user.

Detailed Description Text (35):

EAS can also accommodate those end users who wish to employ a strategy of purchasing power or natural gas at the lower of the bid price in the auction or the price they agreed to pay a contract Provider under a term contract. This contract price would be transmitted by the end user to the Moderator and the Moderator would

include this contract price among the bids it evaluates when generating provider selection data in regard to each such end user. If the contract price is lower than all of the other bids, the relevant control computer (or the Moderator) would select the contract Provider as the Provider of choice for that end user. If the contract price is higher than any of the other bids, the low bidder would be selected as the end user's Provider. The contract price serves as a ceiling while the end user can still capture the benefit of low prices made available via the auction (e.g., at night when system-wide demands for power are lower than during peak daytime periods). To ensure that this end user can satisfy the volume commitments that would likely be part of any attractively-priced contract, the Moderator could enable this end user to designate from time to time (e.g., during certain peak demand daytime hours) that the contract price is to be treated as the low bid available to that end user at that time. At other times the Moderator will consider all bids submitted by other Providers as well as the contract price.

Detailed Description Text (36):

Most bidders participating in the auction would be expected to supply 100% of the electric power or natural gas needed by the end users for whom these bidders are selected as the current Provider. Some bidders, however, may wish to submit bids to supply a fixed quantity of power or natural gas to an end user or group of end users during a particular period of time, rather than commit to supply 100% of the power or natural gas this end user needs or actually consumes. The Moderator can accommodate this type of bid by prescribing standard units or blocks of power or natural gas that Providers can use when formulating such bids. The Moderator would consider such bids only for end users who wish to participate and only as part of an auction process in which the bids compared are those for identical units or blocks of power or natural gas. In the event that insufficient units or blocks of energy are offered, the Moderator could again rely on a default Provider, either for 100% of the end user's energy requirements or only for the shortfall needed.

Detailed Description Text (37):

An end user could, under this approach, have more than one Provider delivering power or natural gas to his facilities during the same period of time. For example, a large end user with a need for 1000 kilowatts of power during every hour between 8:00 a.m. and 6:00 p.m., Monday through Friday, elects to participate in EPAS under the above unit or power block approach. Four Providers submit bids to supply (in order of the lowest-priced bids first) 600, 200, 200 and 500 kilowatts of power for the period between 9:00 a.m. and 10:00 a.m. each day. The relevant control computer (or the Moderator) selects the three Providers who bid 600, 200 and 200, respectively, on the basis of their low bids and the amount of power offered.

Detailed Description Text (38):

In another example of the auction using units or blocks of power or natural gas, the auction rules might specify that only one Provider (and, perhaps, a default Provider to cover any shortfall) will be selected for each end user from among those bidding to supply blocks of power. In that event, in order to make its selection of a Provider for each end user, the control computer (or the Moderator) would only consider bids to supply blocks of power or natural gas of sufficient size to fulfill 100% of the end user's projected power or natural gas requirements or, at the election of the end user, some lesser quantity of power or natural gas previously specified by the end user, with the shortfall to be covered by the default Provider. Under a block bidding approach, the end user would likely be committed to a take-or-pay obligation with each of the partial Providers, including the default Provider covering any shortfall. Because electric power is fungible, as is natural gas, the end user's meter would not be able to distinguish whether the electric power or natural gas supplied by one Provider was consumed in its entirety while another Provider's supply was not. This unit or block approach would probably be practical only for those large users who can control with some precision how much power or natural gas they consume at any time or have highly predictable usage profiles on a recurring basis.

Detailed Description Text (42):

Depending on the type of end user and the needs of the Provider (and, perhaps, the end user's DISCO), the frequency at which actual usage reports should be fed back to the selected Provider or DISCO will vary. For example, very large users of electric power can create temporary imbalances in the local power grid and contribute to meaningful fluctuations in the aggregate amount of power required to be supplied by a selected Provider to meet the needs of all of its customers in a particular service area. The DISCO for that end user will also want to obtain timely usage information in order to manage such imbalances on its local grid effectively. Frequent meter readings would be desirable for this type of customer. On the other hand, residential customers as a group have fairly predictable usage profile patterns and would require much less frequent monitoring. The Moderator will process and transmit such actual usage reports at such frequencies as are specified in the auction rules, with reasonable exceptions accommodated at the request of the selected Provider or DISCO. In addition, to facilitate such end user's energy management efforts, the Moderator can also transmit actual energy usage data (with or without current information on bid prices) on a periodic basis back to the end user (to be received by the end user's meter or such other terminal equipment as the end user may designate) or, in the alternative, the Moderator can transmit such data to an electronic mail address or Internet website designated by the end user.

Detailed Description Text (48):

Billing under this disclosed invention could be handled, for example, by one of three methods: (i) by the Moderator applying the historical bid data to the energy used by each end user, as recorded by the meter of such end user, without necessarily requiring the participation of the end user's DISCO in the billing process, (ii) by the DISCO reporting the energy usage data of each end user to the Moderator (if the DISCO performs meter readings for end users who are EPAS subscribers), and the Moderator then creating a bill by applying the appropriate bid rates to the quantities of energy used while those bids applied, sorted by the selected Providers, or (iii) by the Moderator supplying historical bid data to the DISCO's billing computer for the period coinciding with the end user's billing cycle, and the DISCO's billing computer then creating a bill by applying the appropriate bid rates to the quantities of energy used while those bids applied, sorted by the selected Providers. A third-party meter reading service entity instead of the DISCO could collect energy usage data and transmit that usage data to the Moderator for the Moderator to create a bill for each end user. In the alternative, the third-party meter reading service could use the energy usage data it collects, together with the Moderator's historical bid data, to create such a bill.

Detailed Description Text (50):

Bid information submitted by participating Providers to the Moderator in the course of the auction will be stored for a period of time by the Moderator in its database (or that of an associated adjunct computer). The Moderator will also record and store in its database the identity of the Provider(s) selected to supply power or natural gas to each end user or group of end users during any billing cycle.

Detailed Description Text (51):

With the relevant bid price of the selected Provider and the actual energy usage data for the period this Provider supplied power or natural gas to an end user, the Moderator can prepare a billing statement for that end user and each of its Providers during a billing cycle. Interim statements, covering any period within the billing cycle, can also be prepared by the Moderator. Billing statements, whether for the entire billing cycle or any interim periods, can be transmitted by the Moderator to the end user or the applicable Provider (or an adjunct computer associated with the Provider's billing system).

Detailed Description Text (52):

Some Providers may wish to prepare and deliver their own billing statement for each end user, assuming the end user is willing to bear the inconvenience of multiple bills for electric power, for example, covering the same monthly billing cycle (i.e., if more than one Provider supplies power to this end user during that month). Using the energy usage data collected by the Moderator (or DISCO) for each end user and transmitted periodically to the Provider, that Provider could apply its appropriate bid rate to such actual usage in order to render a bill for each such end user. As an alternative that most end users would likely find more palatable, the Moderator can install data links or electronic interfaces between such Providers' billing systems and the Moderator's billing computer, enabling each Provider to transmit billing information it prepared for each end user to the Moderator. After receiving such billing data from each Provider, the Moderator's billing computer can collate the Providers' data into a single integrated bill for the end user.

Detailed Description Text (55):

In any jurisdiction where the PUC or other regulatory authority permits the DISCO to retain the exclusive right to read end users' meters, the Moderator will arrange to receive the relevant meter reading data from the DISCO. To produce a billing statement for each end user and the applicable Provider, the Moderator can process the usage data received from the DISCO and match it up with the selected Providers' appropriate bid data stored in the Moderator's database. Again, the Moderator can transmit billing statements to the end user and each of the selected Providers. Such statements can cover the entire billing cycle or any interim period.

Detailed Description Text (58):

FIG. 1 shows an exemplary system for carrying out the herein disclosed auction process for the provision of electric power or natural gas to end users (or resellers) in which a Moderator 1 administers the collection and dissemination of bidding information. The Moderator 1 includes a computer with a processor and memory, together with input and output devices to communicate with the Providers' energy management computers 2, which are the source of the bidding information. By means of these systems, the Providers bid to become the selected Provider of electric power or natural gas for an end user or group of end users. The Providers transmit their bids from their energy management computers 2 over data links 3, which may be either analog (using modems) or digital. However, the information is usually transmitted in digital form for input into the Moderator. Each Provider has an energy management administrator who enters energy management instructions into each energy management computer 2 through an input port 4 by means, for example, of a keyboard or a data link from a remote site or local computer.

Detailed Description Text (59):

The Moderator 1 receives the bids, processes them in its bidding processor 5 to produce provider selection data, and enters both into a database in its memory by means of the data buses and registers internal to a computer. The bids are sorted according to delivery destination within the respective service areas of the DISCOs for subscribing end users. The Moderator 1 processes the bids to prioritize them for each delivery destination, producing derivative data, including provider selection data. This data can reflect, for example, designation of a selected Provider and alternate Providers, based on the Providers' bids to supply the power or natural gas requirements of each end user or group of end users. The Moderator can also designate a default Provider in the event, for example, the Provider selected by the bidding process has no additional capacity available. The Moderator 1 transmits the derivative data over a data link 7 to a control computer 8 associated with the end user or set of end users for which the submitted bids are applicable.

Detailed Description Text (60):

The control computer 8 can apply decision rules, formulated and inputted by the

control computer's administrator (e.g., the energy manager for a very large end user), to the derivative data received from the Moderator 1 in order to select a Provider. A control computer may be operated by the end user, the end user's DISCO, or the Moderator (on behalf of the end users associated with that control computer). In many cases, end users may prefer to deal directly with the Moderator or may not wish to assume the additional expense, if any, arising from the installation or operation of a control computer. In that event, no control computer would be required. As illustrated in FIGS. 7 and 10, the Moderator can perform all the functions that the control computer would otherwise perform, including the selection of a Provider offering the lowest rate (or best economic incentive) at that time to each such end user.

Detailed Description Text (65):

The Moderator 1 also transmits at least a portion of the received bids to the energy network management computers 2 (or associated adjunct computers) of Providers over data links 3. There are many transmission technologies available to transmit this bid data to the Providers, including dedicated bidirectional links between the Moderator and each Provider.

Detailed Description Text (67):

FIG. 2 illustrates a system architecture in which the Providers' energy management computers 2 submit bids and receive data transmissions from the Moderator 1 over dedicated communications links 19. The control computer 8 receives rate information and/or provider selection data and transmits Provider selection notifications to the Moderator 1 over dedicated data links 20. The Moderator can transmit such a notification to the applicable Provider 2 over dedicated link 19 and to the applicable DISCO's power grid or pipeline management and/or billing computer 10 over shared data link 9.

Detailed Description Text (69):

FIG. 4 illustrates an exemplary method of the herein disclosed invention in which Providers formulate bids and transmit these bids 28 to the Moderator. Upon receiving such bids 29, the Moderator processes the bids to determine which bids apply to which set of end users associated with each control computer 30, prioritizes the bids by, for example, listing the lowest bid first (and then the next lowest and so on) and generates provider selection data 31. The Moderator then transmits 32 rate information and/or provider selection data to each applicable control computer. After some initial processing of the bids received, the Moderator also transmits 33 at least a portion of the received bid information to competing Providers.

Detailed Description Text (70):

The control computer receives from the Moderator the rate information and/or provider selection data, applies decision rules, if any, that the control computer administrator has inputted, and selects 34 a Provider for each set of end users this control computer serves. The control computer transmits 35 to the Moderator a notification identifying the Provider that has been selected, together with a specification of the estimated energy requirements for the set of end users this Provider will supply. The Moderator, in turn, will transmit 36 this information to a computer 37 associated with the selected Provider's energy network management computer and, perhaps, to the power grid or gas pipeline management and/or billing computer 38 of the DISCO that serves as the local energy distribution company for the set of end users to be supplied by the selected Provider.

Detailed Description Text (75):

The Moderator, by means of a billing processor, can prepare a billing statement for each end user and transmit such statement via data link to the selected Provider for that end user. This billing processor receives from the Moderator's adjunct computer, via data link or data bus, processed meter reading data (including actual energy usage data) for each end user. By accessing the Moderator's database, the

billing processor obtains the stored bid information for the bidder selected by the Moderator as the end user's Provider during the period of time for which energy usage was measured by the end user's meter. The billing processor matches this information with the processed meter reading data for that end user and creates a billing statement.

Detailed Description Text (76):

As illustrated in FIG. 15, the Moderator's adjunct computer 46 collects meter reading data from each end user being served and correlates 47 that usage data with the historical bid data of each of the Providers that were selected to serve this end user during various periods over the billing cycle. As a result of this processing, the Moderator can generate a bill for each end user.

Detailed Description Text (77):

FIG. 16 illustrates an alternative bill generation approach, in which the DISCO serving the applicable end user can generate a bill for that end user if the DISCO is responsible for collecting usage data 48 from end user meters. In this exemplary system, the Moderator transmits 49 to the applicable DISCO the historical bid data of each of the Providers that were selected to serve this end user during various periods over the billing cycle. The DISCO can correlate 50 this bid information with the meter reading data it collected from this end user's meter during the billing cycle in order to generate 51 a bill for this end user.

CLAIMS:

1. A method for creating an automated auction among energy providers and end users in which a moderating computer collects economic incentive data from each provider of a plurality of energy providers, processes the economic incentive data and distributes processed data to a plurality of control computers, each control computer associated with at least one end user, thereby enabling each of the plurality of control computers to select a provider of the plurality of energy providers for the provision of energy to the end users, based on an economic choice, wherein the method comprises:

a. receiving in the moderating computer, economic incentive data specifying the economic incentive each provider will place on a unit of energy provided to end users associated with at least a portion of the plurality of control computers, processing the economic incentive data to determine which of the economic incentive data correspond to a first control computer and to produce derivative data, and storing the economic incentive data and derivative data in a data base of the moderating computer as first control computer data;

b. transmitting at least a portion of the first control computer data to the first control computer; and

c. transmitting at least a portion of the first control computer data to at least portion of the plurality of energy providers.

10. A method for creating an automated auction among energy providers and end users in which a moderating computer acting on behalf of end users collects economic incentive data from each provider of a plurality of energy providers, processes the economic incentive data and selects a provider of the plurality of energy providers for the provision of energy to each of a plurality of end users, based on an economic choice, wherein the method comprises:

a. receiving in the moderating computer, economic incentive data specifying the economic incentive each provider will place on a unit of energy provided to each of the plurality of end users, processing the economic incentive data to determine which of the economic incentive data correspond to a first set of end users and to produce derivative data, and storing the economic incentive data and derivative

- data in a data base of the moderating computer as first end-user set data;
- b. transmitting at least a portion of the first-end user set data to at least a portion of the plurality of energy providers;
- c. processing in the moderating computer the first end-user set data in order to select a provider of the plurality of energy providers for the provision of energy to the first set of end users;
- d. transmitting a selection notification to the provider of the plurality of energy providers that is selected by the moderating computer, based on the first end-user set data, to be the selected provider of energy to the first set of end users; and
- e. transmitting a copy of the selection notification to a local energy distribution company that distributes energy to the first set of end users whose energy requirements are to be supplied by the selected provider of energy.
20. A method for managing the provision of energy, by a first provider of a plurality of energy providers, to at least one end user associated with a control computer in accordance with economic incentives arrived at through a bidding process involving a central processor, referred to as a bidding moderator, comprising the steps of:
- a. collecting energy availability data for each of the providers, each provider entering the energy availability data, corresponding to the energy the provider can make available to end users, into its network management computer's network management database;
- b. each network management computer (i) receiving management instructions from that provider's network management administrator, (ii) formulating economic incentives for at least a portion of the provider's available energy based on the management instructions and the energy availability data, and (iii) transmitting the economic incentives to the bidding moderator;
- c. in the moderator, receiving the economic incentives, entering the economic incentives from each provider in the moderator's database, and sorting the economic incentives to identify all economic incentives associated with each control computer;
- d. transmitting at least a portion of the economic incentives received by the moderator to at least a portion of the plurality of energy providers, entering the economic incentives in each provider's network management database, and adjusting each provider's economic incentives in consideration of the economic incentives from at least one other provider;
- e. sorting the economic incentive data to determine which of the economic incentive data correspond to a first control computer, transmitting a determined portion of the economic incentive data to the first control computer and entering the determined portion of the economic incentive data into the first control computer's database;
- f. transmitting decision rules formulated by the first control computer's administrator to the first control computer and entering the decision rules in the control computer's database;
- g. in the control computer, applying the decision rules to the economic incentive data, thereby generating provider selection data, and populating the control computer's database with the provider selection data;
- h. selecting a provider of the plurality of energy providers for the provision of

energy to the at least one end user associated with the first control computer in accordance with the provider selection data and notifying the moderator of the selection;

j. the moderator notifying the selected provider of the selection and transmitting, to a computer associated with the selected provider's network management computer, a specification of the estimated energy requirements the selected provider should expect to provide to the at least one end user associated with the first control computer; and

j. the selected provider processing the specification and periodic usage reports from the moderator and adjusting its energy production in accordance with the specification and periodic usage reports.

25. A method for managing the provision of energy, by a first provider of a plurality of energy providers, to at least a first set of end users of a plurality of end users in accordance with economic incentives arrived at through a bidding process involving a central processor, referred to as a bidding moderator, comprising the steps of:

a. collecting energy availability data for each of the providers, each provider entering the energy availability data, corresponding to the energy the provider can make available to end users, into its network management computer's network management database;

b. each network management computer (i) receiving management instructions from that provider's network management administrator, (ii) formulating economic incentives for at least a portion of the provider's available energy based on the management instructions and the energy availability data, and (iii) transmitting the economic incentives to the bidding moderator;

c. in the moderator, receiving the economic incentives, entering the economic incentives from each provider in the moderator's database, and sorting the economic incentives to identify all economic incentives associated with the first set of end users;

d. transmitting at least a portion of the economic incentives received by the moderator to at least a portion of the plurality of energy providers, entering the economic incentives in each provider's network management database, and adjusting each provider's economic incentives in consideration of the economic incentives from at least one other provider;

e. transmitting to the moderator decision rules formulated by the moderator's administrator and entering the decision rules in the moderator's database;

f. in the moderator, applying the decision rules to the economic incentive data, thereby generating provider selection data, and populating the moderator's database with the provider selection data;

g. selecting a provider of the plurality of energy providers for the provision of energy to the first set of end users in accordance with the provider selection data;

h. the moderator notifying the selected provider of the selection and transmitting, to a computer associated with the selected provider's network management computer, a specification of the estimated energy requirements the selected provider should expect to provide to the first set of end users; and

i. the selected provider processing the specification and periodic usage reports from the moderator and adjusting its energy production in accordance with the

specification and periodic usage reports.

27. A moderator of claim 26 further including means for receiving decision rules from a control computer administrator associated with the first control computer and applying the decision rules to the economic incentive data to generate the provider selection data.

32. An automated provider selection system for selecting a first provider of a plurality of energy providers for the provision of energy to at least one end users, comprising:

- a. a control computer;
- b. means for receiving in the control computer decision rules from a control computer administrator and storing the rules in the memory;
- c. means for receiving at least a portion of the economic incentive data from a bidding moderator and storing the economic incentive data in the memory;
- d. means, within the processor, for accessing the rules and the economic incentive data in the memory and applying the rules to the economic incentive data to produce provider selection data, dependent on the economic incentive data;
- e. means for transmitting the provider selection data to the control computer for entry into the control computer's database; and
- f. means for selecting the first provider based on the provider selection in the control computer's database.

33. A method for billing end users for energy used during a billing period, resulting from an auction process in which a moderating computer collects economic incentive data from each provider of a plurality of energy providers, processes the economic incentive data and distributes processed data to a first control computer of a plurality of control computers, the first control computer associated with a first set of end users, thereby enabling the first control computer to select a provider of the plurality of energy providers for the provision of energy to the first set of end users, based on an economic choice, wherein the billing method comprises:

- a. receiving in the moderating computer, energy usage data including, at least, an end user identifier and a selected provider identifier for each end user of the first set of end users;
- b. associating the energy usage data with the economic incentive data to produce a billing record including the end user identifier and the portion of the economic incentive data applied to the energy used by the end user;
- c. storing the billing record in a billing data base; and
- d. sorting the billing data base by end user identifier and generating a bill for energy usage associated with each end user identifier during the billing period.

37. A method for billing end users for energy used during a billing period, resulting from an auction process in which a moderating computer collects economic incentive data from each provider of a plurality of energy providers, processes the economic incentive data and distributes processed data to a first control computer of a plurality of control computers, the first control computer associated with a first set of end users, thereby enabling the first control computer to select a provider of the plurality of energy providers for the provision of energy to the first set of end users, based on an economic choice, wherein the method comprises:

a. receiving in a billing computer associated with at least one end user, economic incentive data from the moderating computer and energy usage data from a local energy distribution company, including at least, an end user identifier and a selected provider identifier;

b. associating the energy usage data with the economic incentive data to produce a billing record including the end user identifier and the portion of the economic incentive data applied to the energy used by the end user and storing the billing record in a billing data base; and

c. sorting the billing data base by end user identifier and generating a bill for energy usage associated with each end user identifier during the billing period.

40. A method for creating an automated auction among energy providers and end users in which a moderating computer acting on behalf of end users collects economic incentive data from each provider of a plurality of energy providers, processes the economic incentive data and selects a provider of the plurality of energy providers for the provision of energy to each of a plurality of end users, based on an economic choice, wherein the method comprises:

a. receiving in the moderating computer, economic incentive data specifying the economic incentive each provider will place on a unit of energy provided to each of the plurality of end users, processing the economic incentive data to determine which of the economic incentive data correspond to a first set of end users and to produce derivative data, and storing the economic incentive data and derivative data in a data base of the moderating computer as first end-user set data;

b. transmitting at least a portion of the first-end user set data to at least a portion of the plurality of energy providers;

c. processing in the moderating computer the first end-user set data in order to select a provider of the plurality of energy providers for the provision of energy to the first set of end users; and

d. transmitting a selection notification to the provider of the plurality of energy providers that is selected by the moderating computer, based on the first end-user set data, to be the selected provider of energy to the first set of end users.

41. A method for creating an automated auction among energy providers and end users in which a moderating computer acting on behalf of end users collects economic incentive data from each provider of a plurality of energy providers, processes the economic incentive data and selects a provider of the plurality of energy providers for the provision of energy to each of a plurality of end users, based on an economic choice, wherein the method comprises:

a. receiving in the moderating computer, economic incentive data specifying the economic incentive each provider will place on a unit of energy provided to each of the plurality of end users, processing the economic incentive data to determine which of the economic incentive data correspond to a first set of end users and to produce derivative data, and storing the economic incentive data and derivative data in a data base of the moderating computer as first end-user set data;

b. transmitting at least a portion of the first-end user set data to at least a portion of the plurality of energy providers;

c. processing in the moderating computer the first end-user set data in order to select a provider of the plurality of energy providers for the provision of energy to the first set of end users;

d. transmitting a selection notification to the provider of the plurality of energy providers that is selected by the moderating computer, based on the first end-user set data, to be the selected provider of energy to the first set of end users and transmitting to a computer associated with the selected provider's network management computer, a specification of energy requirements the selected provider should expect to provide to the first set of end users;

e. transmitting a copy of the selection notification to a local energy distribution company that distributes energy to the first set of end users whose energy requirements are to be supplied by the selected provider of energy; and

f. the local energy distribution company transmitting to the selected provider, periodic usage reports of energy usage by the first set of end users.

44. A method for conducting an automated auction among a plurality of energy providers and end users, comprising:

a. collecting economic incentive data from a plurality of energy providers;

b. transmitting at least a portion of the economic incentive data to at least a portion of the energy providers, whereby each energy provider has an opportunity to adjust its bids in view of the bids of competing energy providers;

c. prioritizing the economic incentive data that apply to a first set of end users;

d. designating a first energy provider to be the designated provider of energy to the first set of end users on the basis of the prioritized economic incentive data; and

e. informing the designated provider of its designation, a specification of estimated energy requirements and periodic usage reports, thereby enabling the first energy provider to efficiently adjust its energy supply.